Data Science B.S. with Geospatial Data Analytics Concentration

Data Science B.S. with Geospatial Data Analytics Concentration Eight-Semester Program

First Year	Units	
	Fall	Spring
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1)[1]	4	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
DASC 1003 Introduction to Data Science	3	
DASC 1104 Programming Languages for Data Science	4	
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
ECON 2143 Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)		3
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)		3
DASC 1204 Introduction to Object Oriented Programming for Data Science		4
DASC 1223 Role of Data Science in Today's World		3
Year Total:	14	17

Second Year	Units	
	Fall	Spring
DASC 2594 Multivariable Math for Data Scientists	4	
STAT 3013 Introduction to Probability[4] or INEG 2323 Probability and Stochastic Processes for Industrial Engineers	3	
DASC 2213 Data Visualization and Communication	3	
DASC 2113 Principles and Techniques of Data Science	3	
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2)[2]	3	
SEVI 2053 Business Foundations (Data Science Majors-only section)		3
STAT 3003 Statistical Methods[4] or INEG 2314 Statistics for Industrial Engineers I		3-4
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)[2]		4
DASC 2203 Data Management and Data Base		3
GEOS 3543 Geospatial Applications and Information Science		3
Year Total:	16	16

Third Year	Units	
	Fall	Spring
DASC 2133 Data Privacy & Ethics (Satisfies General Education Outcome 5.1)	3	
DASC 3103 Cloud Computing and Big Data	3	
GEOS 3553 Spatial Analysis Using ArcGIS	3	
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.2 and 3.3)2[2]	3	
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)[2]	4	
DASC 3203 Optimization Methods in Data Science		3
DASC 3213 Statistical Learning		3
GEOS 3593 Introduction to Geodatabases		3
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1)[2]		3
State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1)[2]		3
Year Total:	16	15

Fourth Year	Units	
	Fall	Spring
DASC 4892 Data Science Practicum I	2	
DASC 4113 Machine Learning	3	
DASC 4123 Social Problems in Data Science and Analytics	3	
GEOS 3563 Geospatial Data Mining	3	
GEOS 4263 Geospatial Data Science - Sources and Characteristics	3	
DASC 4993 Data Science Practicum II (Satisfies General Education Outcome 6.1)		3
GEOS 4653 GIS Analysis and Modeling		3
Geospatial Data Analytics Concentration Elective		3
General Elective[3]		2-3
Year Total:	14	12

Total Units in Sequence:	120

1. Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 2554.
2. Students must complete the State Minimum Core requirements (http://catalog.uark.edu/undergraduatecatalog/gened/stateminimum/) as outlined in the Catalog of Studies. The courses that meet the state minimum core also fulfill many of the university's General Education requirements (http://catalog.uark.edu/undergraduatecatalog/gened/generaleducation/), although there are additional considerations to satisfy the general education learning outcomes. Students are encouraged to consult with their academic adviser when making course selections.
3. Students are required to complete 40 hours of upper-division courses (3000-4000 level). It is recommended that students consult with their adviser when making course selections.

[4] Data Science Statistics and Computational Analytics Concentration students are advised to select STAT 3013/STAT 3003 to meet the prerequisites required in the concentration.